

Instructions for CRMEP 09/01/09 Draft PRE-TREATMENT Checklist FC - FISH PASSAGE at STREAM CROSSINGS

To be used for fish passage improvement projects at stream crossings only.

Y = Yes, the question applies and the answer is yes, comment if needed. **P** = Partially, the question cannot be answered definitively yes or no, comment suggested. **N** = No, the question applies and the answer is no, comment if needed.
D = Don't know, the answer is unknown and cannot be found; preferable to blank. **A** = Not applicable, the question or sub-question does not apply to the feature.

See Manual Part IX and X for guidance. See below for 3-letter code key; see glossary for definitions.

THE FEATURE LOCATION MUST BE DESCRIBED USING THE PROTOCOL FOR DOCUMENTING THE LOCATION OF HABITAT RESTORATION FEATURES. IT IS ESSENTIAL THAT SOMEONE CONDUCTING POST-TREATMENT MONITORING BE ABLE TO RELOCATE THE SAME SECTION OF STREAM WHERE THE FOLLOWING DATA WERE COLLECTED.

FISH questions pertain to the targeted fish species.

1. Use the flow chart and directions on DFG Restoration Manual pages IX-31-33 to determine passage.
FISH PASSAGE questions 2 & 3 pertain to adult fish. FISH PASSAGE questions 4 & 5 pertain to juvenile fish.
 - 2/4. A specific goal stated in the grant, proposal or verbalized by project proponent or grant manager.
 - a. List species, by code from Restoration Manual Appendix E, for which passage improvement is aimed.
 - 3/5. Answer based on quantitative data or visual evidence using best professional judgment.
 - a. Barrier category that exists pre-treatment, enter only one. See DFG Restoration Manual page IX-1.
 - b. Barrier category treatment intends to achieve, enter only one. See DFG Restoration Manual page IX-1.
- Barrier Category Definitions:** *Temporal* – Impassable to all fish at certain flow conditions. *Partial* – Impassable to some fish species, during part or all life stages at all flows. *Total* – Impassable to all fish at all flows.
- c. Conditions that are blocking fish passage, enter all that apply. See DFG Restoration Manual page IX-3.
 - d. List conditions to be addressed by the fish passage project, enter all that apply.
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SEDIMENT DELIVERY questions should be answered regardless of goals.

6. Answer based on evidence of crossing fill entering the stream.
 - a. Determine sediment sources based on visual evidence.
 - b. Enter the estimated volume in cubic yards that delivered to the stream in the past ten years.
 7. Estimate sediment volume that could deliver in the next ten years using protocols from Manual Part X, in cubic yards.
 - a. Estimate the potential for significant erosion at the feature, based on observations. This is a probability estimate, not an estimate of how much erosion is likely to occur. See DFG Restoration Manual page X-A-7.
 8. A specific goal stated in the grant, proposal or verbalized by project proponent or grant manager.
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CHANNEL questions should be answered regardless of goals.

9. Refers to aggradation at the barrier and caused by the barrier, not at a stream or reach level.
 10. Refers to scour, incision and/or head-cutting resulting from the barrier, not at a stream or reach level.
 11. Refers to other localized undesirable channel conditions such as braiding, flow obstructions, grade controls, undesirable lateral migration, narrowing, straightening, widening, etc. near the barrier, not at a stream or reach level.
 12. A specific goal stated in the grant, proposal or verbalized by project proponent or grant manager.
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BANK questions should be answered regardless of goals.

13. Stream bank erosion or apparent instability caused or affected by the barrier.
 - a. Location of erosion or instability relative to the proposed structure or barrier modification. Record location as upstream of, downstream of and/or within the barrier AND left and/or right bank determined looking downstream (e.g. DNS – LBK, RBK UPS – LBK WIN – LBK). Use comment space if needed.
 - b. Determine using visual evidence and knowledge of land use and erosion processes.
14. A specific goal stated in the grant, proposal or verbalized by project proponent or grant manager.

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Movement of watershed PRODUCTS questions should be answered regardless of goals.

15. Refers to an accumulation of debris, substrate, or water behind the crossing.
a. List which are impaired - debris (e.g. LDA), substrate (e.g. grade control) or water (e.g. at a dam or tide gate).
16. A specific goal stated in the grant, proposal or verbalized by project proponent or grant manager.

Code definitions

BAR	Lack of stabilizing vegetation, bare	GRZ	Grazing/grazing animal	SBE	Streambank erosion
CGA	Culvert gravel absent	HIG	High potential	SBL	Streambank landslides
CHIN	Chinook salmon	HYD	Hydrologic processes	SCW	Stream crossing washouts (gullies)
CNR	Concentrated runoff	LAN	Landing failures	SFE	Surface erosion
COHO	Coho salmon	LBK	Left bank	SH	Steelhead trout
CT	Cutthroat trout	LOW	Low potential	SUB	Substrate
CUT	Road cutbank failures	MOD	Moderate potential	TEM	Temporal barrier
DBR	Debris	NON	None	TOT	Total barrier
DIV	Stream diversion	NRG	Non-road gullying	UND	Undercut/Undermined
DNS	Downstream	NRL	Non-road (hillslope) debris landslides	UPS	Upstream
EFL	Earthflows and large, slow moving landslides	NRP	No resting pool	USG	Unstable soils/geology
EMG	Emergent groundwater	OTH	Other	WIN	Within
FJH	Fish jump height	PAR	Partial barrier	WTD	Water depth
FLS	Road fillslope failures	RBK	Right bank	WTR	Water
		RRG	Other road-related gullying	WTV	Water velocity